

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

1. (currently amended) A method of cellular labeling comprising the steps of:

(a) exposing insoluble particles comprising at least one paramagnetic complexes ~~complex~~ of lanthanide or transition metal chelates to cells; as MR-imaging probes, administered in form of particulate which is internalised by cells where they are degraded enzymatically or by effectors in the environment surrounding them, giving rise to

(b) internalizing the at least one paramagnetic complex inside the cells and

(c) degrading the paramagnetic complexes by enzymes or by effectors in the environment surrounding the paramagnetic complexes to form water soluble MR-imaging probes.

2. (currently amended) ~~Particles according to The method of claim 1, characterised in that their insolubility is wherein the particles are insoluble~~ due to hydrophobic substituents bound to the surface of ~~the~~ a chelating cage.

3. (currently amended) ~~Particles according to The method of claim 2,~~ wherein the hydrophobic substituents are aliphatic chains conjugated to the paramagnetic complex through an ester or amide bond.

4. (currently amended) ~~Particles according to The method of~~ claim 1, characterised in that ~~their insolubility is due to a macromolecular component forming the particle itself wherein the particles are insoluble due to a macromolecular component.~~

5. (currently amended) ~~Particles according to The method of~~ claim 4, characterised in that ~~the paramagnetic complexes are covalently bound to the macromolecular component wherein the macromolecular component is covalently bound to the paramagnetic complexes.~~

6. (currently amended) ~~Particles according to The method of~~ claim 1, wherein the paramagnetic complex ~~is~~ comprises a Gd(III) chelate.

7. (currently amended) ~~Particles according to The method of~~ claim 1, wherein the paramagnetic complex ~~is~~ comprises a Mn(II) or a Mn(III) chelate.

8. (currently amended) ~~Particles according to The method of~~ claim 4, wherein the ~~insoluble macromolecule is~~ macromolecular component comprises chitosan or derivatives thereof.

9. (currently amended) ~~Particles according to The method of~~ claim 8, wherein the paramagnetic complex ~~is~~ comprises entrapped inside the macromolecular network through non-covalent interactions.

10. (currently amended) ~~Particles according to The method of~~ claim 9, wherein the paramagnetic complex ~~is~~ comprises a Gd(III) chelate endowed with a residual negative charge.

11. (currently amended) ~~Particles according to The method of~~ claim 9, wherein the paramagnetic complex ~~is~~ comprises a Mn(II) or a Mn(III) chelate endowed with a residual negative charge.

12. (currently amended) ~~Particles according to~~ The method of claim 1, ~~wherein the particles are~~ covered by a dextran polymer or other suitable material ~~to~~ wherein the particles are ~~favour~~ which favors the formation of stable suspensions and ~~to increase~~ which increases the lifetime of the particles in blood.

13. (currently amended) ~~Particles according to~~ The method of claim 1, ~~wherein the particles are~~ functionalised with synthons able to target ~~them~~ the particles to interact with specific recognition sites on the outer membrane of the cells of interest, thus stimulating ~~their~~ cell-internalization.

14. (new) A method for the localization of atherosclerotic plaques comprising the steps of:

- (a) exposing insoluble particles comprising at least one paramagnetic complex of lanthanide or transition metal chelates to cells;
- (b) internalizing the paramagnetic complexes inside the cells and
- (c) degrading the paramagnetic complexes by enzymes or by effectors in the environment surrounding the paramagnetic complexes to form water soluble MR-imaging probes,

wherein cells having macrophagic activity are localized.

15. (new) A method for the detection of occurred transfection in gene therapy comprising the steps of:

- (a) exposing insoluble particles comprising at least one paramagnetic complex of lanthanide or transition metal chelates to cells;
- (b) internalizing the paramagnetic complexes inside the cells and

(c) degrading the paramagnetic complexes by enzymes or by effectors in the environment surrounding the paramagnetic complexes to form water soluble MR-imaging probes,
wherein transfected cells are localized.